

CLAIMS

- 1 Process for removing a contaminant from contaminated groundwater, which
process comprises the following steps:
- 5 a) a biologically active layer is applied on or in the soil
b) the contaminated groundwater is contacted with the biologically active
layer
- 2 Process according to claim 1, characterized in that the biologically active layer
is applied discontinuously.
- 10 3 Process according to either of claims 1-2, characterized in that the biologically
active layer is of such depth that the lower part of the layer is located in the
groundwater.
4. Process according to any one of claims 1-3, characterized in that the
contaminated groundwater is brought into or on top of the biologically active
15 layer.
5. Process according to any one of claims 1-4, characterized in that the
contaminated groundwater is repeatedly contacted with the biologically active
layer with the aid of a gas.
6. Process according to any one of claims 1-5, characterized in that the
20 contaminated groundwater is contacted with the biologically active layer by
pumping.
- 7 Process according to any one of claims 1-6, characterized in that the
contaminated groundwater is contacted with the biologically active layer more
than once.
- 25 8. Process according to any one of claims 1-7, characterized in that the
contaminant is readily soluble.
9. Process according to any one of claims 1-8, characterized in that an electron
acceptor is added during the process.
10. Process according to any one of claims 1-9, characterized in that ammonia is
30 nitrified to nitrate and subsequently nitrate is converted into N_2 through
addition of a carbon-containing component.
- 11 Process according to any one of claims 1-10, wherein the contaminant is NH_3
and which process comprises the following steps:
- 35 a) a biologically active layer is applied in or on the soil
b) the contaminated groundwater is contacted under aerobic conditions

with the biologically active layer whereby in the biologically active layer NH_3 is converted into NO_3^-

- c) step b) is repeated during a period of time that is needed to reduce the concentration of NH_3 to the desired level
 - 5 d) subsequently, the groundwater whose concentration of NH_3 has been reduced to the desired level is contacted with the biologically active layer under anaerobic conditions
 - e) step d) is repeated during the period of time that is needed to reduce the concentration of NO_3^- to the desired level.
- 10 12. Process according to any one of claims 1-11, characterized in that a detergent is added.